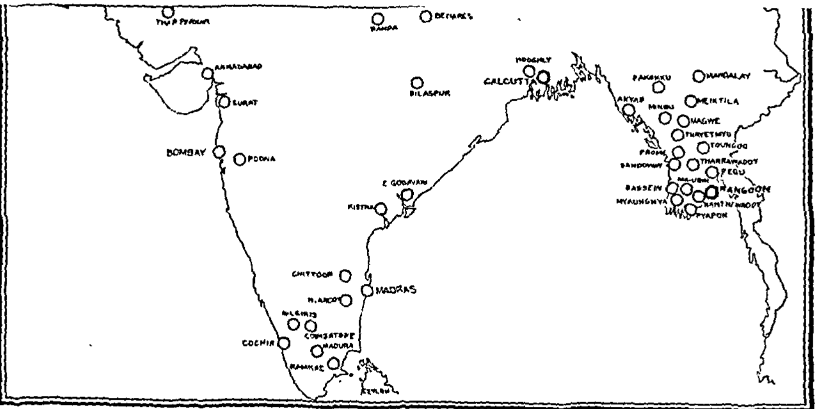

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MEMORANDUM ON CEREBRO-SPINAL MENINGITIS.

1. T

report

Paris fr

Governor

"Note on Cerebro-Spinal Meningitis in England and Wales in 1929-32", by Sir George Buchanan.

Since 1929 the disease has been definitely increasing the cases notified yearly had ranged from 301 to 470 between the years 1922 and 1928, but they had been 650, 664 and 2,157 in the years 1929, 1930 and 1931, respectively

The deaths which are notified constitute a more accurate record of what is really happening than the reports of cases The deaths varied from 284 to 438 during the years 1922-28 but rose to 588, 632 and 1,439 in the years 1929, 1930 and 1931

The increase affected five countries Yorkshire (855), Lancashire (182), Durham (162), Nottinghamshire (148) and Derbyshire (101) Elsewhere the incidence has been normal and sporadic Experience has shown the futility of isolating healthy carriers of the disease except in the case of small closed communities The organism found in

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Ministry of Health on the administration of serum was presented

Epidemic of Cerebro-Spinal Meningitis in Cairo in 1931-32, by Dr Williams.

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Preliminary note on an epidemic of Cerebro-Spinal Meningitis in Egypt in 1932, by Dr. M S. Pasha.

From the end of 1930 there was a steady increase in the number of cases, the numbers being 1929—17 cases, while in December, 1930, alone, there were 15 cases. In 1931 there were 871 cases The disease showed a diminution from June till November, 1931, but in

Cerebro-Spinal Meningitis in the Sudan in 1931, by Dr. Atley.

During 1931 there were 348 cases as compared with 865 in 1930.

In Khartoum there seemed to be a definite correlation of a negative type between the relative humidity and the incidence of the disease The reported cases increased rapidly in March, and remained high in April and May, while the relative humidity fell from 20 to 11 per cent. Towards the end of May the relative humidity rose to 22 per cent. and there was a steady fall in the number of cases. With the breaking of the rains in June, there was a rapid fall and the outbreak practically came to an end. Vaccine prophylaxis was tried in Khartoum, but no appreciable results were noted.

Diagnosis Complications and Results of Serum Treatment of Cerebro-Spinal Meningitis, by Dr. S. S. Bay of Cairo.

[illegible]

2 These statements give the most recent figures for cerebro-spinal meningitis in England and Wales, Egypt and the Sudan. During the discussion which followed their presentation, General Megaw stated that cerebro-spinal meningitis was of decided importance in India where it is constantly present in a sporadic form. He also added that the experience of Egypt and other countries would suggest that there is a distinct danger of the disease assuming epidemic form in this country and the recent outbreak in the Borstal Institution in Lahore might be regarded as a danger signal.

3. Enquiries have been made within recent weeks from the individual provinces in order to ascertain as far as possible what the position is in regard to cerebro-spinal meningitis and in this brief memorandum all known facts have been included The recorded figures refer to the five-year period 1927-31, but figures for 1932 have also been included for certain provinces where these were available.

4. In India epidemics of cerebro-spinal meningitis have so far been uncommon. Major-General Megaw, I. M. S., in a paper* published in June, 1927, gave the following figures, but did not indicate that the disease ever had appeared in epidemic form.

—	N.-W. F. Province.	Punjab.	United Provinces.	Bihar and Orissa.	Bengal.	Assam.	Burma.	Central Provinces.	Bombay.	Madras.
Seen by the reporting officer .	1	9	7	5	3	4	2	5	3	2
Reported by others .	3	6	12	7	11	3	7	5	6	7

Two notable epidemics have occurred recently, one in the Shikarpur [illegible] in 1932, [illegible] North [illegible] ly parts [illegible] siderable as to whether this term has been correctly applied.

[illegible] Geographical Distribution of some of the Diseases of India" published in the [illegible] Gazette", Vol. LXII, No. 6, June, 1927.

5. The incidence of the disease in the Army in India has been as follows :—

Year.	Admissions.	Deaths.
1927	16	13
1928	10	4
1929	8	6
1930	15	6
1931	17	11
1932	14*	12*

6. (a) *North-West Frontier Province.*—A small epidemic occurred in January and February, 1927, among the Frontier constabulary stationed in Peshawar Cantonment Nine cases with six deaths were recorded. The original infection could not be traced.

(b) *Punjab*—During the last five years no outbreak of any importance occurred, but three cases and two deaths were reported in the Indian barracks at Multan Cantonment during February and March, 1928. Two further cases, one in Rawalpindi and the other in Gujrat, of a doubtful nature, occurred in the same year.

The following figures represent total cases treated in hospitals during the last five years :—

District.	
Amritsar	17 (5 Sikhs, 8 Muslims and 4 Hindus).
Lahore	3
Muzaffargarh	69 (all in 1928).
Dera Gazi Khan	2 (Hindus).
Mianwali	4
Jhang	7

During the spring of 1932, an outbreak occurred in the Borstal Institution, Lahore, and 18 cases were reported from the middle of March to the middle of June. Thereafter there were no cases for about 2½ months, but at the end of August a fresh outbreak took place with four seizures up to mid-October.

It may be of interest to give some [illegible] ing the conditions prevailing in this institution prior to the [illegible] A[illegible] is designed to provide for 1,705 [illegible] offenders. 350 inmates are ac[illegible]

———

* Up to the [illegible]

As regards the prison population, the disease broke out in 1931 in Shikarpur special prison, 13 cases being recorded with 12 deaths. According to the Director of Public Health the number of cases was 15 with 14 deaths.

The Inspector-General of Prisons remarks :—

"The disease appears to have been introduced into the prison from Upper Sind where it is endemic and in spite of all precautions, sporadic cases have occurred in the prison throughout the year beginning in the month of April and continuing till the end of the year."

The Assistant Director of Public Health who investigated this matter has reported that cerebro-spinal meningitis is not endemic in Upper Sind, but that his attention has been drawn to a number of sporadic cases which had been under treatment by a number of practitioners in Upper Sind and Sukkur district. There seems to be some reason to believe that cases have occurred sporadically in Shikarpur town, etc., for some considerable time. Otherwise there have been no outbreaks of the disease in the Bombay Presidency jails or among the general population during the quinquennium.

(*k*) *Madras Presidency.*—Statistics of the incidence of cerebro-spinal meningitis in the general population are not available, but the following figures taken from hospital records indicate a fairly widespread occurrence of spasmodic cases :—

Name of District or Station.	Cases treated.				
	1927	1928	1929	1930	1931
North Arcot	2	..	..	..	5
Chittoor	..	..	2	..	..
Coimbatore	Four (the years in which these cases were treated are not available).				
East Godavari	..	2	..	..	..
Kistna	1	..	1	..	..
Madura	..	1	..	..	1
The Nilgiris	..	..	1	1	4
Ramnad	..	..	..	..	2
Cochin	One case during the last 5 years.				
Government General Hospital, Madras	1	..	3	..	1
Royapuram Hospital	..	1	..	1	..

No cases have been recorded in the prison populations of the province.

7. Detailed figures will be found in the appended table.

Statement showing attacks and deaths from cerebro-spinal meningitis during the years 1927—1932.

Areas, localities and institutions which reported cases.	Attacks and Deaths from cerebro-spinal meningitis during the years											
	1927.		1928.		1929.		1930.		1931.		1932.	
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths	Attacks.	Deaths.	Attacks.	Deaths.
North-West Frontier Province.												
Peshawer cantt. Frontier constabulary . .	9	6	..	..	..	..	..	..	..	..	..	..
Punjab.												
Multan cantonment (Indian barracks) . . .	..	..	3	2	..	..	..	..	..	..	..	..
Rawalpindi town . .	..	..	1	..	..	..	..	..	..	..	..	..
Gujrat town . . .	..	..	1	..	..	..	..	..	..	..	..	..
Hospitals and dispensaries .	Quinquennial totals—Amritsar 17 cases; Lahore three; Muzaffargarh 69; Dera Ghazi Khan two; Mianwali four; Jhang seven.											
Lahore Borstal Institution .	..	..	..	..	..	..	..	..		..	22	..
Delhi Province.												
Delhi city . . .	1	..	..	..	..	..	..	..	..	..	..	..
United Provinces.												
Thomason hospital, Agra .	..	..	..	..	1	..	1	..	..	..	..	..
Banda, sadar hospital .	One suspected fatal case—date not known.											
Lady Lyall hospital for women, Agra . .	..	..	..	..	..	..	..	..	1	..	1	..
Benares central jail . .	..	..	..	..	..	..	..	..	..	..	1	..
Etah district jail . .	..	..	..	..	1	1	..	..	..	..	..	..
King George's hospital, Lucknow . . .	..	..	..	..	..	..	..	..	1	1	2	2
Bengal Presidency.												
Hooghly district . .	..	..	..	..	..	..	1	1	..	..	..	..
Calcutta city . . .	8	9	17	17	19	19	13	13	11	11	..	..

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(*l*) *Madras Presidency.*—Statistics of the incidence of cerebro-spinal meningitis in the general population are not available, but the following figures taken from hospital records indicate a fairly widespread occurrence of spasmodic cases :—

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North Arcot	2	..	..	..	5
Chittoor	..	..	2	..	..
Coimbatore	Four (the years in which these cases were treated are not available).				
East Godavari	..	2	..	..	..
Kistna	1	..	1	..	..
Madura	..	1	..	..	1
The Nilgiris	..	..	1	1	4
Ramnad	..	..	..	..	2
Cochin	One case during the last 5 years.				
Government General Hospital, Madras	1	..	3	..	1
Royapuram Hospital . .	..	1	..	1	..

No cases have been recorded in the prison populations of the province.

7. Detailed figures will be found in the appended table.

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	1927.		1928.		1929.		1930.		1931.		1932.	
	Attacks	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.
North-West Frontier Province.												
Peshawar cantt. Frontier constabulary . .	9	6	..	..	..	..	..	..	..	..	..	..
Punjab.												
Multan cantonment (Indian barracks) . . .	..	..	3	2	..	.	..	..	..	..	..	..
Rawalpindi town . .	..	..	1	..	..	..	..	..	..	..	..	..
Gujrat town . . .	.	..	1	..		..	..	..	..	..	..	..
Hospitals and dispensaries .	Quinquennial totals—Amritsar 17 cases; Lahore three; Muzaffargarh 69; Dera Ghazi Khan two; Mianwali four; Jhang seven.											
Lahore Borstal Institution .	..	..	..	..	..	..	..	..		..	22	..
Delhi Province.												
Delhi city . . .	1	.	..	..	..	..	..	..	..	..	..	..
United Provinces.												
Thomason hospital, Agra .	..	..	..	..	1	..	1	..	..	..	..	..
Banda, sadar hospital .	One suspected fatal case—date not known.											
Lady Lyall hospital for women, Agra . .	..	..	..	..	..	..	..	..	1	..	1	..
Benares central jail . .	..	..	..	..	..	..	..	..	..	..	1	..
Etah district jail . .	..	..	..	..	1	1	..	..	..	..	..	..
King George's hospital, Lucknow . .	..	..	..	..	..	..	..	..	1	1	2	2
Bengal Presidency.												
Hooghly district . .	..	..	..	..	..	..	1	1	..	..		..
Calcutta city . . .	8	9	17	17	19	19	13	13	11	11	..	..

Statement showing attacks and deaths from cerebro-spinal meningitis during the years 1927—1932—contd.

Areas or localities where cases were reported.	Attacks and Deaths from cerebro-spinal meningitis during the years											
	1927.		1928		1929.		1930.		1931.		1932.	
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths	Attacks.	Deaths.	Attacks.	Deaths.
Burma.												
Rangoon town		10		7		8		5		2	..	..
Tharrawaddy town		1		..		..		..		..	..	..
Syriam town		5		1		1		..		..	..	..
Prome town		1		2		.		..		..	..	..
Bassein town		1		3		..				..	..	..
Yandoon town		1		.		..		.		..	..	..
Pakokku town		1		..		..		..		..	..	..
Mandalay town		2		1		3		.		..	..	..
Akyab town		..		1		.		..		1	..	..
Sandoway town	Not available.	..	Not available.	1	Not available.	..	Not available.	..	Not available	1	..	..
Pegu town		..		2		1		3		1	..	..
Maymyo town		..		1		2		1		..	..	..
Toungoo town		..		..		3		..		2	..	..
Taungdwingyi town		..		..		1		..		..	..	..
Pyapon town		..		..		..		1		..	..	..
Thayetmyo town		..		..		..		1		..	..	..
Minbu town		..		..		..		1		..	..	..
Meiktila town		..		..		..		1		..	..	..
Rangoon Jail	..	..	1	..	..	..	..	..	1	..	..	..
Toungoo Jail	..	..	..	..	1	..	1	..	..	..	..	..
Myaungmya Jail	..	..	..	..	..	..	..	..	..	..	1	..
Central Provinces												
Bilaspur Jail	..	..	1	1	..	..	..	..	..	..	..	..

Statement showing attacks and deaths from cerebro-spinal meningitis during the years 1927—1932—concld.

Areas or localities where cases were reported.	Attacks and Deaths from cerebro-spinal meningitis during the years											
	1927.		1928.		1929.		1930.		1931.		1932.	
	Attacks	Deaths.	Attacks	Deaths	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths	Attacks.	Deaths.
Bombay Presidency												
G. T hospital, Bombay	2	2	4	2	1		1	1	3	3	..	..
St. George's hospital, Bombay				.	.	.	.	.	.	.	1	..
Civil hospital, Ahmedabad .				.	1		1	1	2		1	1
Civil hospital, Surat .				.			.				1	..
Civil hospital, Larkana .	.			.				.	..	..	4	..
Civil hospital, Sukkur .					.	..	.	.	*13	*12	*7	*6
Civil hospital, Jacobabad .			.	.	.	..	..	.	..	..	†1	†1
Civil hospital, Thar Parkar .	.		1	.	1	..	.	..	..	..	..	..
Civil hospital, Poona . .	.	.	1	1	..	..	.	..	1	1	..	..
Total . .	2	2	6	3	3	.	2	2	19	16	15	8
Madras Presidency.												
North Arcot district . .	2	..	.	..	..	.	..		5	..	..	..
Chittoor district . .		.	.	.	2	..	..	..	..	..	..	..
Coimbatore district . .		Four cases. Dates and years of occurrence not known.										
East Godavari district .	..	Not available.	2	Not available.	..	Not available.	..	Not available.	..	Not available.	..	..
Kistna district . . .	1		..		1		..		..		..	..
Madura district . . .	..		1		..		..		1		..	..
The Nilgiris district . .	.		..		1		1		4		..	..
Ramnad district . .	..		..		..		..		2		..	..
Cochin		Only one case during this period.										
Govt. general hospital, Madras . . .	1	..	..	..	3	..	..	..	1	..	..	..
Royapuram hospital . .	..	..	1	..	..	..	1	..	..	..	..	..

* Treated in the *special prison, Shikarpur.*
† Treated in Kandkot sub-jail.

GIPD—312 DGIMS—8-2 33.—100.